

IS 6347 : 2003

(Reaffirmed 2014)

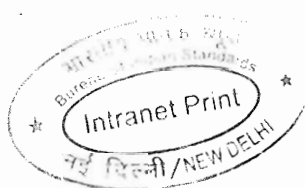
भारतीय मानक

वस्त्रादि—मछली पकड़ने के लिए पोलिएथाइलीन मोनोफिलामेंट
की सुतली—विशिष्टि
(पहला पुनरीक्षण)

Indian Standard

TEXTILES — POLYETHYLENE MONOFILAMENT
TWINES FOR FISHING — SPECIFICATION
(*First Revision*)

ICS 677.718.947.422.639.2.081.1



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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Textile Materials for Marine/Fishing Purposes Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1971. The revision of this standard has been taken up to incorporate the following changes in the light of experience gained:

- a) Requirements for runnage, breaking load, elongation, sampling and criteria for conformity have been modified; and
- b) Terminology has been included.

The composition of the Committee responsible for formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — POLYETHYLENE MONOFILAMENT TWINES FOR FISHING — SPECIFICATION (First Revision)

1 SCOPE

1.1 This standard prescribes requirements of high density polyethylene monofilament twines used in the manufacture of fishing gear.

1.2 This standard does not prescribe the type of finish, feel, etc, of the twines.

2 REFERENCES

The following standards contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below :

<i>IS No.</i>	<i>Title</i>
1398 : 1982	Packing paper, water proof, bitumen laminated (<i>second revision</i>)
5508	Guide for fishing gear:
(Part 1) : 1969	General
(Part 10) : 1972	Data sheet for seer gill net
5815(Part 3):1970	Methods of test for fishing gear materials: Part 3 Determination of twist
5815	Fishing nets:
(Part 4) : 1993	Determination of breaking load and knot breaking load of netting yarns (<i>first revision</i>)
(Part 7) : 1993	Determination of elongation of netting yarns (<i>first revision</i>)

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5508 (Part 1) and IS 5508 (Part 10) shall apply.

4 MANUFACTURE

4.1 The material used in the manufacture of twines shall be of high density continuous monofilament polyethylene having a relative density of 0.95 to 0.96 and a minimum tenacity of 40 g/tex within the range of 0.15 to 0.20 nominal diameter of yarn.

4.2 Twines

The twines shall either be supplied in natural colour or as required by the buyer. They shall be flexible. The finished twines shall be flexible and consist of 3 plies, each being uniform and well laid and as free as practicable from defects in the yarn.

5 REQUIREMENTS

5.1 The twines shall conform to the requirements given in Table 1. The twines shall have S twist unless otherwise agreed to between the buyer and the seller.

5.2 Mass

A tolerance of $\begin{smallmatrix} +10 \\ -5 \end{smallmatrix}$ percent shall be allowed on the declared mass of any one package provided that the variation from the gross specified mass of any delivery to one code number does not exceed 5 percent.

6 MARKING

6.1 The hank or cheeses containing twines shall be marked with the following informations :

- a) Name of the material,
- b) Construction and runnage,
- c) Net mass,
- d) Month and year of manufacture, and
- e) Indication of the source of manufacture.

6.2 BIS Certification Marking

The twines may also be marked with the Standard Mark.

6.2.1 The use of the Standard Mark is governed by the provision of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made there under. The details of conditions under which the license for use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7 PACKING

The twines shall be made into hanks or cheeses as required by the buyer. A suitable number of hanks, or cheeses shall be placed one over the other and shall be wrapped with a layer of waterproof packing material. The pack shall be tied with twine of adequate strength and a suitable number of such packs shall be packed in a container of adequate strength and a suitable

Table 1 Requirements of Polyethylene Monofilament Twines

(Clause 5.1)

Sl No.	Construction		Runnage	Breaking Load, Dry and Wet N(kgf) ¹⁾ , Min	Elongation at Break, Percent, Dry and Wet Max	Turns/metre ²⁾	
	Thickness	(No. of Filament) × Strand				Strand Z way	Twine S way
mm			m/kg				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	0.20	1 × 3	10 235	35 (3.60)	45	—	280
ii)	0.20	2 × 3	5 035	65 (6.60)		280	270
iii)	0.20	3 × 3	3 320	98 (10.00)		260	250
iv)	0.20	4 × 3	2 460	129 (13.16)		195	190
v)	0.20	5 × 3	1 970	160 (16.30)		185	185
vi)	0.20	6 × 3	1 640	190 (19.40)		175	170
vii)	0.20	8 × 3	1 230	253 (25.80)		170	160
viii)	0.20	9 × 3	1 095	280 (28.60)		160	150
ix)	0.20	10 × 3	975	313 (31.90)		155	150
x)	0.20	12 × 3	810	373 (38.04)		150	140
xi)	0.20	15 × 3	650	464 (47.32)		130	125
xii)	0.20	18 × 3	535	559 (57.00)		115	110
xiii)	0.20	21 × 3	460	647 (66.00)		110	100
xiv)	0.20	24 × 3	400	736 (75.07)		100	100
xv)	0.20	28 × 3	345	858 (87.56)		95	90
xvi)	0.20	40 × 3	235	1 226 (125.05)		90	80
Tolerance			± 8 percent	—	—	—	—
Method of Test			Annex A	IS 5815 (Part 4)	IS 5815 (Part 7)	IS 5815 (Part 3)	
¹⁾ 1 N = 0.102 kgf (approximately).							
²⁾ For guidance only.							

number of such packs shall be packed in a container of adequate strength which is previously lined with one layer of waterproof packing paper (see Type 2 of IS 1398). If necessary, the gaps in the container shall be filled with cushioning materials to avoid damage in transit. The container shall be properly secured and bound by iron hoops or wires.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 Lot

The quantity of monofilament twines of the same runnage and construction details delivered to a buyer against one despatch note shall constitute a lot.

8.2 Conformity of a lot to the requirements of this standard shall be determined on the basis of test carried out on the sample selected from it.

8.3 Unless otherwise agreed to between the buyer and the seller, the number of cheeses/packs to be selected from a lot shall be given below:

<i>Lot Size</i>	<i>Sample Size</i>
(1)	(2)
Up to 100	3
101 to 300	4
301 to 500	5
501 to 1 000	7
1 001 and above	10

8.4 The cheeses or packs selected according to 8.3

shall be tested for length, breaking load, elongation at break.

8.5 Criteria for Conformity

The lot shall be conforming to the requirements of this standard. If the following in details are satisfied:

- From the test results for length and breaking load, the average (\bar{x}) and the range (R) shall be determined and the value of the expression $\bar{x} - 0.4 R$ shall not fall below the minimum value specified.
- From the test results for elongation at break, the average (\bar{x}) and the range (R) shall be determined and the value of expression $\bar{x} + 0.4 R$ shall be less than the maximum values specified.

ANNEX A

(Table 1)

METHOD FOR DETERMINATION OF RUNNAGE

A-1 TEST SPECIMENS

Remove 10 m length skeins from each of the hank or cheese constituting the sample under test.

A-2 PROCEDURE

Determine the mass of a skein removed from a hank or cheese to the nearest gram. From the mass compute the runnage (m/kg).

ANNEX B
(Foreword)
COMMITTEE COMPOSITION

Textile Materials for Marine/Fishing Purposes Sectional Committee, TX 18

<i>Organization</i>	<i>Representative(s)</i>
Fisheries Development Commissioner, Ministry of Agriculture, New Delhi	SHRI M. K. R. NAIR (<i>Chairman</i>) SHRI K. VIJAYA KUMARAN (<i>Alternate</i>)
Association of Indian Fishery Industries, New Delhi	SHRI T. RAGHUNATH REDDY
Central Institute of Fisheries Nautical & Engineering Training, Ministry of Agriculture, Kochi	DR C. P. VERGHESE SHRI A. C. KUTTAPPAN (<i>Alternate</i>)
Central institute of Fisheries Technology (ICAR), Cochin	DR B. MEENA KUMARI SHRIMATI SALLY N. THAMAS (<i>Alternate</i>)
Directorate of Fisheries, Kochi	REPRESENTATIVE
Fisheries Survey of India, Mumbai	DR V. S. SOMVANSHI SHRI M. E. JOHN (<i>Alternate</i>)
Garware Marine Industries Limited, Mumbai	SHRI R. N. GANDHI SHRI S. P. PARGAONKAR (<i>Alternate</i>)
Garware-Wall Ropes Ltd, Pune	SHRI R. M. TELANG SHRI S. V. RAUT (<i>Alternate</i>)
Integrated Fisheries Project, Kochi	DR P. PREMALATHA
Office of the Textile Commissioner, Mumbai	SHRI S. P. KALA SHRI N. S. RAWAT (<i>Alternate</i>)
Shriram Fibres Limited, Chennai	SHRI A. SHANMUGAVASAN SHRI V. VIJAYARAGHAVAN (<i>Alternate</i>)
Tamil Nadu Fisheries Development Corporation Ltd, Chennai	REPRESENTATIVE
The Karnataka Fisheries Development Corporation Ltd, Bangalore	REPRESENTATIVE
The Kerala State Co-operative Federation for Fisheries Development Ltd, Kochi	SHRI P. SURENDRAN
Marine Products Export Development Authority, Kochi	SHRI J. RAMESH SHRI N. MOHANDAS (<i>Alternate</i>)
BIS Directorate General	SHRI P. BHATNAGAR, Director and Head (TXD) [Representing Director General (<i>Ex-officio</i>)]
 <i>Member Secretary</i> SHRI B. L. BHARATI Joint Director (TXD), BIS	

Bureau of Indian Standards

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc: No. TX 18 (382).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones: 2323 0131, 2323 3375, 2323 9402

Telegrams: Manaksanstha
(Common to all offices)

Regional Offices:

	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	{ 2323 7617 2323 3841
Eastern : 1/14 C.I.T. Scheme VII M, V.I.P. Road, Kankurgachi KOLKATA 700054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160022	{ 60 3843 60 9285
Southern : C.I.T. Campus, IV Cross Road, CHENNAI 600113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892
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AMENDMENT NO. 1 MAY 2006
TO
IS 6347 : 2003 TEXTILES — POLYETHYLENE
MONOFILAMENT TWINES FOR FISHING —
SPECIFICATION

(First Revision)

(Page 2, Table 1) — Substitute the following for the existing table:

Table 1 Requirements of Polyethylene Monofilament Twines
(Clause 5.1)

Sl No.	Construction		Runnage	Breaking	Knot	Elongation at Break, Percent, Dry and Wet	Turns/Metre ²⁾	
	Thick- ness	(No. of Filament) × Strand		Load, Dry and Wet	Dry and Wet		Strand	Twin
	mm			Min N (kgf) ¹⁾	Min N (kgf) ¹⁾	Max	Z way	S way
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1.	0.20	1 × 3	10 235	35	65	45.00	—	280
2	0.20	2 × 3	5 035	65	116	45.00	280	270
3	0.20	3 × 3	3 320	98	168	45.00	260	250
4.	0.20	4 × 3	2 460	129	242	45.00	195	190
5	0.20	5 × 3	1 970	160	289	45.00	185	185
6	0.20	6 × 3	1 640	190	335	45.00	175	170
7	0.20	8 × 3	1 230	253	438	45.00	170	160
8	0.20	9 × 3	1 095	280	484	45.00	160	150
9.	0.20	10 × 3	975	313	559	45.00	155	150
10	0.20	12 × 3	810	373	661	45.00	150	140
11	0.20	15 × 3	650	464	801	45.00	130	125
12	0.20	18 × 3	535	559	959	45.00	115	110
13	0.20	21 × 3	460	647	1 117	45.00	110	100
14	0.20	24 × 3	400	736	1 257	45.00	100	100
15	0.20	28 × 3	345	858	1 443	45.00	95	90
16	0.20	40 × 3	235	1 226	2 048	45.00	90	80
Tolerance			± 8 percent		—	—	—	—
Method of Test			Annex A IS 5815 (Part 4)		IS 5815 (Part 7)	IS 5815 (Part 3)		

¹⁾ 1 N = 0.102 kgf (approximately).

²⁾ For guidance only.

Amend No. 1 to IS 6347 : 2003

(*Page 3, clause 8.4*) — Substitute the following for the existing:

‘The cheese or packs selected according to 8.3 shall be tested for length, breaking load, knot breaking load, elongation at break.’

[*Page 3, clause 8.5(a), line 1*] — Insert the words ‘knot breaking load’ after the word ‘length’.

(TX 18)

Reprography Unit, BIS, New Delhi, India